

Serial No. 10/088,206
Group Art Unit: 2859
Examiner: Gail Kaplan Verbitsky

LIST OF CURRENT CLAIMS

Claims 1-12 (Canceled)

13. (Currently Amended) A method of monitoring the wear of a rapier band of a rapier loom, wherein the rapier band moves in contact with guide elements, comprising:

generating a temperature signal indicative of the temperature of the rapier band caused by friction between the rapier band and the guide elements while the loom is operating; and

analyzing the temperature signal as a wear characteristic value of the rapier band.

14. (Currently Amended) A method of monitoring the wear of a rapier band of a rapier loom, wherein the rapier band moves in contact with guide elements, comprising:

generating temperature signals indicative of the temperatures of the rapier band caused by friction between the rapier band and the guide elements, and a selected loom component in contact with the rapier band, while the loom is operating; and

analyzing the temperature signals as a wear characteristic value of the rapier band.

15. (Currently Amended) A method of monitoring the wear of a rapier band of a rapier loom, comprising:

generating a temperature signal indicative of the temperature of a selected loom component in contact with ~~the~~ a rapier band moving relative to the component while the loom is operating; and

analyzing the temperature signal as a wear characteristic value of the rapier band.

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16. (Previously Presented) The method as claimed in claim 13 or 14, wherein the temperature signal indicative of the temperature of the rapier band is obtained by directly measuring the temperature of the rapier band.

17. (Currently Amended) The method as claimed in claim 14 or 15, wherein the selected loom component is a guide for the rapier band.

18. (Previously Presented) The method as claimed in claim 17, wherein the guide is an element that maintains the rapier band engaged with a rapier band drive wheel.

19. (Currently Amended) The method as claimed in claim 13 or 14, wherein the temperature signal indicative of the temperature of the rapier band is obtained by measuring the differential between a first directly detected temperature of a rapier band at a first site and a second temperature detected at a second measuring site separated from the first site.

20. (Previously Presented) The method as claimed in claim 13 or 14, wherein the temperature signal indicative of the rapier band is obtained by measuring the temperature differential between a first indirectly detected temperature of a rapier band at a first site and a second temperature detected at a second measuring site separated from the first site.

21. (Previously Presented) A device for monitoring the wear of a rapier band of a rapier loom, comprising a temperature signal generating arrangement arranged to generate a temperature signal indicative of the temperature of the rapier band during operation of the loom; and an analyzer arranged to receive and analyze the temperature signal as a wear characteristic value of the rapier band.

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22. (Previously Presented) A device for monitoring the wear of a rapier band of a rapier loom, comprising a temperature signal generating arrangement arranged to generate temperature signals indicative of the temperatures of the rapier band and a loom component in contact with the rapier band during operation of the loom; and an analyzer arranged to receive and analyze the temperature signals as a function of a wear characteristic value of the rapier band.

23. (Previously Presented) A device for monitoring the wear of a rapier band of a rapier loom, comprising a temperature signal generating arrangement arranged to generate a temperature signal indicative of the temperature of a loom component in contact with the rapier band during operation of the loom; and an analyzer arranged to receive and analyze the temperature signal and to process the temperature signal as a wear characteristic value of the rapier band.

24. (Previously Presented) A device as claimed in claim 21 or 22, wherein the temperature signal generating arrangement includes a first temperature sensor arranged to directly detect the temperature of the rapier band and a second temperature sensor spaced away from the first temperature sensor.

25. (Previously Presented) The device as claimed in claim 21 or 22, wherein the temperature signal generating arrangement includes a first temperature sensor arranged to indirectly detect the temperature of the rapier band and a second temperature sensor spaced away from the first temperature sensor.

26. (Previously Presented) The device as claimed in claim 25, wherein the first temperature sensor is associated with a guide element which maintains the rapier band engaged with a rapier band drive wheel.

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27. (Previously Presented) The device as claimed in claim 26, wherein the guide element includes a thermally conducting support receiving the first temperature sensor at a first site located near the rapier band and the second temperature sensor spaced away from the first temperature sensor, said second temperature sensor also being spaced away from the rapier band.

28. (Previously Presented) The device as claimed in claim 21, 22 or 23, including an input unit associated with the analyzer for supplying a comparison value to the analyzer.

29. (Previously Presented) The device as claimed in claim 21, 22 or 23, including a display arranged to receive a signal from the analyzer that is indicative of wear of the rapier band and to display information indicative of such wear.

30. (Currently Amended) The device as claimed in claim 29, wherein the analyzer is connected to ~~loom~~ a control system of the loom.

31. (Previously Presented) The device as claimed in claim 21, 22 or 23, wherein the analyzer is connected to a control system of the loom.